Data Sheet

G.shdsl WAN Interface Cards
for the Cisco 1700/2600/3700 Series

The Cisco 1700/2600/3700 Series with the high-bit-rate digital subscriber line (G.shdsl) WAN interface card is the industry's first multiservice router to deliver business-class broadband service with scalable performance, flexibility, and security for branch and regional offices. Combined with the integrated G.shdsl WAN Interface Cards (WIC-1SHDSL or WIC-1SHDSL-V2), the Cisco1700/ 2600/ 3700 is the perfect solution for a variety of businesses requiring high-speed business-class DSL connectivity on a secure, high-performance modular platform.

G.shdsl technology offers customers high-speed, symmetrical Wide Area Network (WAN) connectivity at a lower monthly cost than most traditional WAN circuits. Combined with the WIC-1SHDSL (single pair SHDSL only) or WIC-1SHDSL-V2 (single or dual pair SHDSL), the Cisco 1700, 2600 and 3700 provides businesses the necessary bandwidth for critical traffic such as voice and videoconferencing, and allows customers to save money by integrating voice and data traffic on the same WAN link. Service providers can increase subscriber revenues by bundling services and offering differentiated service levels through Service Level Agreements (SLAs).

G.shdsl represents the first symmetrical worldwide- accepted DSL standard and is the latest in DSL technology. Based on ITU recommendation G.991.2, the G.shdsl WAN Interface Cards allow for better interoperability with third-party vendors. For more information on G.shdsl technology and the Cisco suite of DSL products, see the following URL or contact your local Cisco representative:

http://www.cisco.com/warp/public/779/servpro/solutions/dsl/gshdsl.html

Figure 1
Single Port G.shdsl WAN Interface Card (WIC-1SHDSL-V2)

WIC-1SHDSL-V2 Feature Summary

- Symmetrical WAN speeds up to 2.3Mbps over a single copper pair and up to 4.6Mbps over two copper pairs
- Based on ITU Recommendation G.991.2 (Accepted Worldwide)
- Support for "Dying Gasp", utilizes power status bit (section 7.1.2.5.3 of G.991.2) for signaling
- Support for Wetting Current (Section A.5.3.3 of G.991.2)

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- Support for G.shdsl Annex A (U.S. signaling) and Annex B (European signaling)
- Multiple G.shdsl WAN Interface Cards configurable per Cisco 1700/2600/3700 chassis
- Toll-quality voice over data via AAL2 on 2600/3700 series, AAL5, and VoIP on 1700/2600/3700 series
- Extensive ATM CoS and IP QoS support
- Operates back-to-back or via DSLAM
- Sustains up to 23 virtual circuits Per WAN Interface Card

WIC-1SHDSL Feature Summary

- Symmetrical WAN speeds (up to 2.3Mbps) over a single copper pair
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Key Benefits

Symmetrical, High-Speed, Cost-Effective Bandwidth

Based on the International Telecommunications Union (ITU) G.991.2 global industry standard, Cisco's G.shdsl solutions deliver symmetrical data rates from 192 Kbps up to 4.6 Mbps (Note: speeds above 2.3Mbps requires the WIC-1SHDSL-V2 and a second copper pair to be used). More traditional WAN links, such as leased-line and ISDN, provide similar service, but often at a much higher monthly cost. Cisco G.shdsl WAN Interface Cards (WICs) deliver symmetrical connectivity and provide the necessary bandwidth for business applications such as VoIP, videoconferencing and toll-bypass at a lower monthly charge.

The Cisco 1700, 2600 and 3700 Series allow for a flexible number of installed WAN ports. Multiple G.shdsl WICs can be configured per router chassis to provide additional bandwidth, or to supply connectivity to additional sites or service providers. With the broad array of Network Modules (available for the Cisco 2600 and 3700 only), and WICs; flexible configurations including ADSL, Async dial, ISDN, T1/E1, Frame Relay, ATM, and OC-3 (Cisco 3700 series) are also possible. Secondary WAN links can therefore be used to provide more available bandwidth and/or redundancy for mission critical applications.

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Integrated Voice and Data over G.shdsl

Service providers and enterprise customers continue to expand deployment of voice services to remote customers. While more traditional technologies require separate data and voice systems, advanced QoS mechanisms merged with high-bandwidth WAN links such as DSL make it possible to effectively combine voice and data traffic in the same WAN connection without sacrificing quality or reliability. Traffic management is the key element for this type of deployment. The G.shdsl WAN Interface Cards for the Cisco 1700, 2600 and 3700 support critical QoS mechanisms that provide a scalable and manageable solution for toll-quality voice transmission, while reserving ample bandwidth for data service.

- Service providers increase revenue by building differentiated service options based on premium, standard, or best-effort service classes
- Enterprise customers reduce costs and increase service offerings to their remote branch offices by delivering voice connectivity without the high costs of dedicated voice links.

(See the "QoS" section of this document for more details on IP and ATM QoS features.)

Business-Class Security

The 1700, 2600 and 3700 can be optimized for virtual private networks (VPNs). VPNs allow for secure use of any shared network incorporating the same policies and levels of security and performance as a private network. The Cisco1700, 2600 and 3700 Series provide VPN security through hardware-based 3DES IPSec and Advanced Encryption Standard (AES[1]) encrypted tunneling at speeds of up to 90 Mbps. VPN capability over G.shdsl allows for secure access to corporate networks without the costs and limitations associated with point-to-point links.

In addition, the Cisco 1700, 2600 and 3700 Series incorporates Cisco IOS Firewall technology (CiscoSecure Integrated Software) supporting stateful firewall and intrusion detection functionality. With an always-on DSL connection, Internet security is a critical component in protecting corporate resources from malicious attacks.

Interoperability

The G.shdsl WAN Interface Cards are based on the Globespan chipset and operates when connected back-to-back or when connected to a DSLAM.

Customers can deploy G.shdsl WAN Interface Cards in a back-to-back configuration to take advantage of existing copper wiring in a building, campus, or neighborhood where DSLAM aggregation equipment is either not needed or financially justified. In back-to-back mode, one side of the connection is configured in Central Office (CO) mode and will provide similar functionality to that of a DSLAM.

1. AES on the 1700, 2600 series is software-based.

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DSLAM Interoperability

	WIC-1SHDSL (two wire ATM mode)	WIC-1SHDSL-V2 (two wire ATM mode)	WIC-1SHDSL-V2 (four wire ATM mode)
Cisco 6000 Series DSLAM	X	X	
Alcatel ASAM 7300 (12 & 24 port linecards)	X	X	X
ECI HiFocus SAM 240[1] (16 Port Metalink based linecards)	X	X	
Lucent Stinger FS (32 & 48 Port linecards)	X	X	
CopperEdge 200 DSLAM (24 port linecards)	X	X	X

1. ECI Metalink based line cards interoperate with Cisco CPE only in Fixed Mode.

Performance

SHDSL performance varies according to DSLAM linecard type, DSLAM Software version, training rate, line noise, and loop length.

IP Quality of Service (QoS)

The Cisco 1700, 2600[2] and 3700[2] Series with a G.SHDSL WAN Interface Card supports the integration of voice and data over the same G.SHDSL circuit using VoIP and the Cisco 2600 and 3700 support voice over ATM (VoATM), thus allowing for further reduction of recurring monthly WAN charges. Table 1 describes all the IP QoS features that are supported on the WIC-1SHDSL and WIC-1SHDSL-V2. For more information about IP QoS, please refer to the following URL or contact your local Cisco representative:

http://www.cisco.com/univercd/cc/td/doc/product/software/ios122/122newft/122limit/122y/122yn8/ft_ipqos.htm

Table 1 Supported IP QoS features

Classification and Marking
• Class-Based Marking with Differentiated Services Code Point (DSCP) (data only) • Committed access rate (CAR) with DSCP (Ingress-Ethernet/Fast Ethernet; Egress—G.SHDSL) • Dial-peer DSCP/IP Precedence marking
Queuing and Scheduling
• Class-Based Weighted Fair Queuing (CBWFQ) • Low Latency Queuing (LLQ) • Driver per-VC Queuing

2. Please note that some features are available on a subset of platforms only in 12.3(2)T or later.

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Table 1 Supported IP QoS features

Classification and Marking
Congestion Avoidance
• Class-Based Weighted Random Early Detection (WRED) with DSCP (Egress)
Policing and Traffic Shaping
• Class-Based Policing • Per-ATM VC shaping for VBR—nrt • ATM Cell Loss Priority (CLP) Bit Marking[1]
Link Efficiency
• Selectable Transmit Ring Setting of 3 or 24 packets • Tunable Tx Ring Buffer for values 2 through 60[1] • Multilink Point-to-Point Protocol (MLPPP) fragmentation with interleaving (LFI) • Multilink Point-to-Point Protocol (MLPPP) with LLQ, CBWFQ, and other QoS features[1] • Compressed Real-Time Transport Protocol (cRTP)[1]
Other (IP QoS)
• Local Policy Routing (LPR) • Policy-Based Routing (PBR) • IP QoS map to ATM Class of Service

1. Supported in Cisco IOS 12.3(2)T or later. Please refer to the following URL or contact your local Cisco representative for more details: http://www.cisco.com/univercd/cc/td/doc/product/software/ios122/122newft/122limit/122y/122yn8/ft_ipqos.htm

The G.shdsl WAN Interface Cards for the Cisco 2600 and 3700 provide support for ATM Class of Service (CoS) (CBR, VBR-nrt, VBR-rt, and UBR) features that enable service providers to manage their core ATM network infrastructures to deliver scalable, cost-effective services with CoS guarantees to their customers. Permanent-virtual-circuit (PVC) traffic shaping and queuing allow further optimization of the existing bandwidth between customers and various services.

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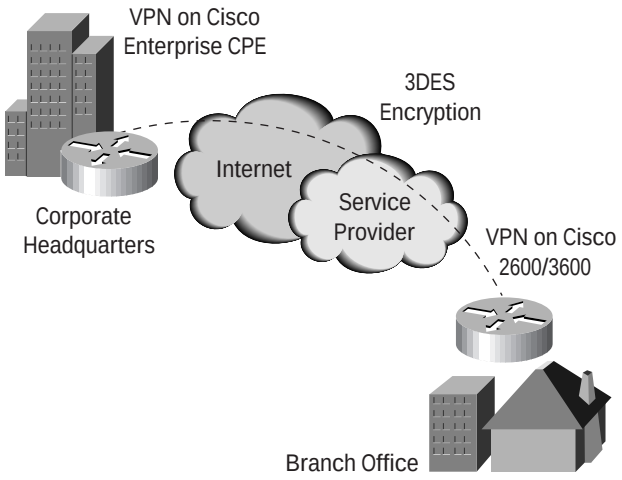
Applications

Scenario 1—Secure VPN through the Internet over G.shdsl

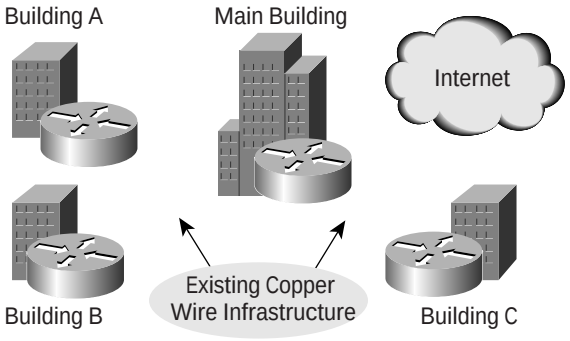
Figure2
Secure VPN through the Internet over G.shdsl



Business customers can take full advantage of the cost-saving opportunities of VPN technology by deploying VPNs over G.shdsl. Symmetrical bandwidth and high bit rates allow customers to affordably deploy mission-critical applications at remote sites without compromising data security. The Cisco 1700, 2600 and 3700 can deliver hardware-encrypted data at speeds up to 90 Mbps, and can therefore adequately meet the demands of one or multiple G.shdsl connections. VPN technology with IPSec 3DES or AES combined with integrated Cisco IOS firewall technology gives branch offices the added security needed for an “always-on” connection to the Internet.

Scenario 2—Back-to-back Deployment in a Campus Environment

Figure 3
Back-to-back G.shdsl deployment in a campus environment



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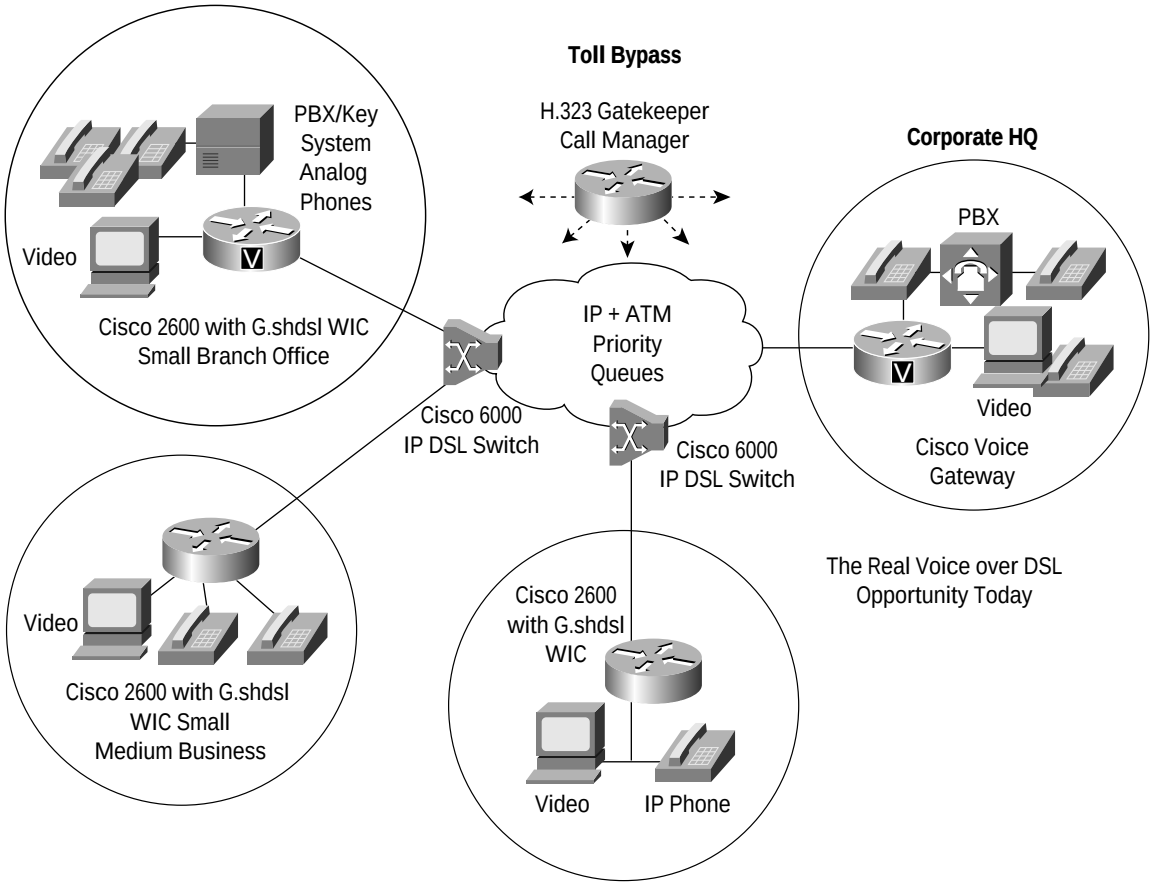
Many businesses today require data and voice connectivity between multiple buildings in a campus environment. Often copper wire is the only means to interconnect each facility to a campus' main building. G.shdsl technology allows customers to link two Cisco 1700, 2600/3700s with WIC-1SHDSL or WIC-1SHDSL-V2 cards back-to-back over standard 26 AWG telephone wire and provide up to 2.3-Mbps WAN per copper pair connectivity between the two sites (up to 4.6Mbps is possible using the WIC-1SHDSL-V2 and two copper pairs). This enables deployment of data, voice, and video over existing copper wire without a costly infrastructure upgrade. Multiple WIC-1SHDSL or WIC-1SHDSL-V2 cards can be used to allow for additional bandwidth between locations.

Scenario 3—Intranet Toll-Quality Voice

Figure 4
Intranet toll-quality voice



The Cisco 1700, 2600 and 3700 combined with the WIC-1SHDSL or WIC-1SHDSL-V2 enable interoffice voice calls to be sent across a DSL network, thus avoiding the charges incurred from a long-distance carrier, local exchange carrier (LEC), or Port, Telephone, and Telegraph (PTT). Customers simply lease an ATM virtual circuit (VC) between one or multiple sites and use VoATM or VoIP technology to pass Intranet voice traffic between sites.

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Features and Benefits Summary

Table 2 G.shdsl WAN Interface Cards Features and Benefits Summary

Feature	Benefits
Flexibility	
Cisco IOS Support	• Provides the industry's most robust, scalable, and feature-rich internetworking software support using the de facto standard networking software for the Internet and private WANs • Part of the Cisco end-to-end network solution (including multiprotocol routing (IP, IPX, AppleTalk, IBM/SNA) and bridging)
Integrated Voice and Data Networking	
Voice and Data Integration	• Reduces long-distance toll charges by allowing the data network to carry interoffice voice and fax traffic • Works with existing handsets, key units, and PBXs, eliminating the need for a costly phone-equipment upgrade • Support for critical IP QoS features in Cisco IOS • See Table 1 for more details on supported IP QoS features • Traffic management with ATM CoS
Digital Voice Interfaces	• Provides toll-quality, award-winning derived VoIP; software-support VoIP/AAL5 and VoATM/AAL2 (Cisco 2600 and 3700 only), AAL5
Analog Voice Interfaces	• Analog voice is supported for VoATM/VoIP over AAL5 • Analog voice originating on NM-HDA is supported over AAL2 • Analog and BRI voice originating on the NM-1V/2V cards is not supported over AAL2
Standards-Based H.323 Signaling	• Allows an ecosystem of third-party vendors to develop applications for a complete solution; allows rapid low-cost deployment of VoIP
DSPs and Voice-Compression Codecs G.711, G.729a, G.723.1, G.726	• Provide hardware-based compressed voice to fit significantly more voice lines over a single copper-pair without breaking the end-to-end delay budget
Sub-Cell Multiplexing (AAL2) (Cisco 2600 and 3700 only)	• Enables multiple voice channels to share an ATM cell leading to efficient bandwidth utilization
Modular Architecture	
Variety of WAN Interface Cards, Voice Interface Cards (VIC), and Network Modules	• Added flexibility and investment protection • Provides easy migration from Frame or ADSL to SHDSL
Multiple Platform Support	• G.shdsl WAN Interface Cards are supported across a variety of Cisco Platforms including the 1700, 2600, 2600XM, 2691, 3600, and 3700 series routers. • Reduced cost of maintaining inventory • Lowers training costs for support personnel • Protects investments through reuse on various platforms

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Table 2 G.shdsl WAN Interface Cards Features and Benefits Summary (Continued)

Feature	Benefits
Security with VPN and Integrated Firewall	
Hardware-Based Encryption	• Enables creation of VPNs by providing industry-standard data privacy, integrity, and authenticity as data traverses the Internet or a shared public network • Hardware-based VPN encryption performance of up to 90-Mbps throughput
3DES IPSec, AES, GRE, L2TP, L2F	• Choice of standards-based tunneling methods to create VPNs for IP and non-IP traffic • Fully interoperable with public certificate authorities and IPSec standards-based products • Part of the scalable Cisco end-to-end VPN solution portfolio
Cisco IOS Firewall Feature Set	• (CiscoSecure Integrated Software) includes context-based access control for dynamic firewall filtering, denial of service detection and prevention, Java blocking, and real-time alerts • Allows internal users to access the Internet with secure, per-application-based, dynamic access control while preventing unauthorized Internet users from accessing the internal LAN
NAT/PAT	• Hides internal IP addresses from external networks • Prevents certain denial-of-service attacks from outside networks on internal hosts • Allows multiple users access via a single IP address
PAP/CHAP, MS-CHAP, RADIUS, TACACS+	• Supports all leading user identity verification schemes
Route and Router Authentication	• Accepts routing table updates from only known routers, ensuring that no corrupt information from unknown sources is received
IKE, X.509v3 Digital Certification	• Ensures proper identity and authenticity of devices and data • Enables scalability to very large IPSec networks through automated key management • Support for certificate enrollment protocol (CEP) with certification authorities (CAs) such as Verisign and Entrust
ATM Features	
ATM Traffic UBR, VBRnrt, VBRrt, and CBR with Traffic Shaping	• Ensure QoS guarantees for real-time traffic, with ability to send traffic over the appropriate virtual circuit to provide ATM level shaping and ensure that no head-of-line blocking occurs between circuits of different or equal traffic classes
Up to 23 Virtual Circuits per WAN Interface Card	• Enables more sessions at a time and relevant for small and medium-sized businesses and small branch offices with 50-200 employees • Per-VC queuing supported in Cisco IOS Release 12.2(2)XK, 12.2(4)XL, 12.2(13)T, 12.2(8)YN, and subsequent releases (per-VC queuing not supported in Cisco IOS versions 12.2(4)T, 12.2(8)T1, or 12.2(11)T)
PPP over ATM	• Ensures compatibility with existing network
F5 OAM Continuity Check (F5OAMCC)	• Supported in Cisco IOS 12.2(4)XL, 12.2(11)T2, 12.2(8)YN, and subsequent releases

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Table 2 G.shdsl WAN Interface Cards Features and Benefits Summary (Continued)

Feature	Benefits
ILMI	• Supported in Cisco IOS 12.2(4)XL 12.2(13)T, 12.2(8)YN, and subsequent releases
PPP Over Ethernet Client	• Meets service provider requirements and eliminates the need for additional network software on LAN connected client PCs
RFC 1483 Routing	• Supports RFC-1483 Routing
Device Integration	
Integrated Router, Voice Gateway, Firewall, Encryption, VPN Tunnel Server, DSU/CSU, and NT1 in a Single Device	• Reduces costs and simplifies management

Memory and Software Requirements for Cisco 2600XM and 3700 Series

The WIC-1SHDSL requires a "Plus" feature set if using 12.2T. From 12.3Mainline and beyond WIC-1SHDSL support is available in the "IP Base" feature set. The WIC-1SHDSL-V2 is available in all supported feature sets. The recommended release is chosen based on the broadest support of new platforms and new features and does not prevent or limit the use of subsequent or prior releases. Table 3 shows the first release that provides support for WIC-1SHDSL per Platform. Table 4 shows the first release that provides support for WIC-1SHDSL-V2 per platform. Refer to IOS Upgrade Planner or consult your local representative for information regarding memory planning.

Memory and Software Requirements for Cisco 1700 Series

The WIC-1SHDSL and WIC-1SHDSL-V2 are supported on all y7 legacy images as well as the cross-platform images. Table 3 and 4 show the recommended Cisco IOS Release for each WIC. Refer to the Cisco IOS Upgrade Planner or the Cisco IOS Release Notes for information on memory.

Table 3 Minimum Release required for WIC-1SHDSL support per platform for the Cisco 1700, 2600, 2600XM, 3600, and 3700.

Platform	Minimum Required Release for WIC-1SHDSL Support	Recommended Release	Comments
1700	12.2(4)XL	12.3Mainline	
2610-51	12.2(4)XL, 12.2(8)T	12.3Mainline	IP QoS support first available in 12.2(4)XL
2610-51XM, 2691	12.2(8)T1	12.3(2)T	IP QoS support first available in 12.2(8)YN
3620	12.2(4)XL212.2(8)T	12.3Mainline	IP QoS support first available in 12.2(4)XL2
3640, 3660	12.2(4)XL2, 12.2(8)T	12.3(2)T	IP QoS support first available in 12.2(4)XL2

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Table 3 Minimum Release required for WIC-1SHDSL support per platform for the Cisco 1700, 2600, 2600XM, 3600, and 3700. (Continued)

Platform	Minimum Required Release for WIC-1SHDSL Support	Recommended Release	Comments
3640A	12.2(11)T1, 12.2(8)YN	12.3(2)T	IP QoS support first available in 12.2(8)YN
3700 Series	12.2(11)YT	12.3(2)T	IP QoS support first available in 12.2(13)T

Table 4 Minimum Release required for WIC-1SHDSL-V2 support per platform for the Cisco 1700, 2600XM, 2691, and 3700

Platform	Minimum Required Release for WIC-1SHDSL Support	Recommended Release	Comments
1700	12.3(4)XG	12.3(4)XG	
2610-51XM, 2691	12.3(4)XD	12.3(4)XD	Full IP QoS support available in all supported releases
3700 Series	12.3(4)XD	12.3(4)XD	Full IP QoS support available in all supported releases

Platform Support

Table 5 provides platform support details.

Table 5 Platform Support Details

	WIC-1SHDSL	WIC-1SHDSL-V2
Platforms Supported	Cisco 1720, 1721, 1750, 1751, 1760, 2610-51, 2610-50XM, 2691, 3620, 3640, 3640A, 3660, 3725, and 3745	Cisco 1721, 1751, 1760, 2610-50XM, 2691, 3725, and 3745
On Board WIC Slots on all platforms	Yes	Yes
NM-2W Support	Yes	Yes
NM-1FE2W, NM2FE2W, NM-1FE1R2W Support	Yes	Yes
NM-1FE2W-V2, NM2FE2W-V2, NM-1FE1R2W-V2 Support	Yes	No

Note: Support for WIC-1SHDSL-V2 Fast Ethernet LAN/WIC Network Modules (NM-1FE2W-V2, NM-2FE2W-V2, and NM-1FE1R2W-V2) is planned for a future phase. Please contact your Cisco representative for more information.

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Product Number and Ordering Information

Table 6 Product Numbers

Product Number	Description
WIC-1SHDSL	1-port G.shdsl WAN Interface Card (two wire only)
WIC-1SHDSL=	1-port G.shdsl WAN Interface Card (two wire only)
WIC-1SHDSL-V2	1-port G.shdsl WAN Interface Card (two or four wire)
WIC-1SHDSL-V2=	1-port G.shdsl WAN Interface Card (two or four wire)
CISCO2611XM-SHDSL	2611XM-SHDSL Bundle, WIC-1SHDSL, 2FE, IP+, 32FLASH, 128DRAM
CISCO1721-SHDSL	1721 bundle, w/WIC-1SHDSL, IP/ADSL, 32MB FL, 64MB DRAM
CISCO1721-SHDSL-V2	1721 bundle, w/ WIC-1SHDSL-V2, IP/ADSL, 32MB FL, 64MB DRAM
CISCO1760-SHDSL	1760 bundle, w/WIC-1SHDSL, IP/ADSL, 32MB FL, 64MB DRAM
CISCO2621XM-SHDSL	2621XM-SHDSL Bundle, WIC-1SHDSL, 2FE, IP+, 32FLASH, 128DRAM
CISCO2651XM-SHDSL	2651XM-SHDSL Bundle, WIC-1SHDSL, 2FE, IP+, 32FLASH, 128DRAM

Hardware Specifications

Table 7 Hardware Specifications

G.shdsl Chipset	Globespan chipset
Dimensions	Width: 3.08 in. (6.93 cm) Height: .75 in. (1.91 cm) Depth: 4.38 in. (9.86 cm)
Weight	2.4 oz. (68 gram)
LEDs	CD (Carrier Detect) LP (Loopback) OK (DSLSAR Download Complete)
Ports	Single RJ-11/RJ-14C Connector
Cabling	RJ-11 Line Cord
NEBS Compliance	Level 3 compliant

Refer to the Cisco 1700, 2600, 3600 and 3700 Data Sheets for additional information on mechanical, environmental, and agency certifications. Please see the following URLs for Cisco 1700, 2600, 3600 and 3700 data sheets:

- Cisco 1721

  http://www.cisco.com/en/US/products/hw/routers/ps221/products_data_sheet09186a00800920ec.html
- Cisco 1760

  http://www.cisco.com/en/US/products/hw/routers/ps221/products_data_sheet09186a00800920f2.html

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- Cisco 2600

  http://www.cisco.com/en/US/products/hw/routers/ps259/products_data_sheet09186a00801761b1.html
- Cisco 3600

  http://www.cisco.com/en/US/products/hw/routers/ps274/products_data_sheet09186a0080091ba4.html
- Cisco 3700

  http://www.cisco.com/en/US/products/hw/routers/ps282/products_data_sheet09186a008009203f.html

Maximum G.shdsl WAN Interface Cards Per ChassisPlatform

Table 8 Maximum G.shdsl WAN Interface Cards per chassis

Platform	Maximum G.shdsl WAN Interface Cards Per Chassis
Cisco 1700	2
Cisco 2600XM	4
Cisco 2691	5
Cisco 3725	7
Cisco 3745	11

Note: Note See your local Cisco representative for overall platform performance guidelines.

Country Support

- Worldwide accepted technology based on ITU Recommendation 991.2
- See the following URL or contact your local Cisco representative for country specific approval status:

  http://tools.cisco.com/cse/prdapp/jsp/externalsearch.do?action=externalsearch&page=EXTERNAL_SEARCH

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Safety, EMC, Telecom, Network Homologation, Power, Environmental Requirements, and Regulatory Approvals

The Cisco WIC-1SHDSL and WIC-1SHDSL-V2 do not change the standards (safety, EMC, telecom, network homologation, power, environmental requirements, and regulatory approvals) of the router itself when installed in a Cisco 1700/2600/3600/3700 series product. For more information on these topics, see the platform specific data sheets at the following URLs:

- For Cisco 1721 and 1760

  http://www.cisco.com/en/US/products/hw/routers/ps221/products_data_sheet09186a00800920ec.html

- For Cisco 1751

  http://www.cisco.com/en/US/products/hw/routers/ps221/products_data_sheet09186a00800920f2.html

- For Cisco 2600/2600XM/2691

  http://www.cisco.com/en/US/products/hw/routers/ps259/products_data_sheet09186a00801761b1.html

- For Cisco 3600 Series

  http://www.cisco.com/en/US/products/hw/routers/ps274/products_data_sheet09186a0080091ba4.html

- For Cisco 3700 Series

  http://www.cisco.com/en/US/products/hw/routers/ps282/products_data_sheet09186a008009203f.html

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